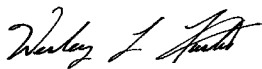


Appl. No. 10/047,769
Appeal Brief dated February 5, 2009
Reply to Office Action dated September 8, 2008

CERTIFICATE OF TRANSMISSION

I hereby certify that this correspondence is being electronically transmitted to the United States Patent and Trademark Office, via EFS-Web, on February 5, 2009.



/Wesley L. Austin/

Attorney for Appellants

PATENT APPLICATION
Docket No. SLA1062

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellants:	Daniel L. Klave et al.)	
)	
Serial No.:	10/047,769)	
)	
Filed:	January 15, 2002)	
)	
Title:	SYSTEMS AND METHODS FOR REDUCING)	Group Art
	MEMORY USAGE IN AN EMBEDDED SYSTEM)	Unit: 2192
	BY LOADING INDIVIDUAL SOFTWARE)	
	COMPONENTS)	
)	
Examiner:	Thuy Chan Dao		

APPEAL BRIEF

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

An Office Action dated September 8, 2008 rejected all pending claims (i.e., claims 47-53, 55-63, 65-72, 74 and 75) in the present application. A Notice of Appeal was submitted on December 5, 2008. Appellants' Appeal Brief is being filed herewith.

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1. REAL PARTY IN INTEREST

The real party in interest is the assignee, Sharp Laboratories of America, Inc.

2. RELATED APPEALS AND INTERFERENCES

There are no related appeals and/or interferences.

3. STATUS OF CLAIMS

Claims 47-53, 55-63, 65-72, 74 and 75 are pending in the present application. Claims 47-53, 55-63, 65-72, 74 and 75 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 7,212,306 to Chrisop (hereinafter, "Chrisop") in view of U.S. Patent No. 7,148,980 to Tominaga (hereinafter, "Tominaga"). Claims 1-46, 54, 64 and 73 have been canceled.

Appellants appeal the above rejections.

4. STATUS OF AMENDMENTS

No amendments were filed subsequent to the final rejection.

5. SUMMARY OF CLAIMED SUBJECT MATTER

The claimed subject matter relates generally to multi-function peripherals. Multi-function peripherals include and utilize non-volatile memory and volatile memory. Non-volatile memory is memory that holds its content without power. Examples of non-volatile memory are ROMs, PROMs, EPROMs, flash memory, hard drives, etc. Volatile memory loses its content without power. An example of volatile memory is RAM.

At startup, a multi-function peripheral may copy items from non-volatile memory to volatile memory or to RAM. Data stored in RAM may be accessed faster and thus improves performance of the multi-function peripheral. As a result, it is desirable to use RAM when possible. In certain cases RAM is not available for use because it is occupied by other program code or data. It would be beneficial to use RAM for its most efficient use and/or to reduce the RAM usage requirements of a multi-function peripheral. In addition, it would be beneficial to allow the RAM usage to be configurable.

As required by 37 C.F.R. § 41.37(c)(1)(v), a summary of claimed subject matter immediately follows. The references to the specification refer only to embodiments of the invention. The invention is defined by the claims. Accordingly, these references to the specification are not meant to limit the scope of the claims at issue in any way but are only provided because they are mandated by 37 C.F.R. § 41.37(c)(1)(v). All references are to the patent specification.

47. A multi-functional peripheral (26) comprising a printer configured to reduce volatile memory (80) usage by selectively loading some individual software components (204) and not loading other individual software components (204), the multi-functional peripheral (26) comprising:

a processor (78); (page 5, line 12)

volatile memory (80) in electronic communication with the processor (78); (page 5, lines 12-14)

non-volatile memory (81) in electronic communication with the processor (78) comprising:
(page 5, lines 12-14)

a plurality of individual software components (204), wherein the software components (204) comprise software libraries; and (page 6, lines 10-15)

a loading table (206) that indicates which of the plurality of individual software components (204) are loaded into the volatile memory (80) and which of the plurality of individual software components (204) are not loaded into the volatile memory (80), wherein the individual software components (204) that are loaded into the volatile memory (80) correspond to a configuration of the multi-function peripheral (26), and wherein the individual software components (204) that are not loaded into the volatile memory (80) do not correspond to the configuration of the multi-functional peripheral (26); (page 5, lines 9-10; page 6, line 22 - page 7, line 9)

instructions stored in the non-volatile memory (81) that are executable to:

examine the loading table (206) to determine which of the plurality of individual software components (204) are to be loaded into the volatile memory (80); and (page 7, lines 20-21)

load each of the plurality of individual software components (204) that are to be loaded, as indicated in the loading table (206), into the volatile memory (80) so that these software components (204) are all loaded into the volatile memory (80) at the same time; and (page 7, line 21 - page 8, line 4)

not load any of the plurality of individual software components (204) that are not to be loaded into the volatile memory (80) as indicated in the loading table (206). (page 7, line 21 - page 8, line 4)

57. A computer-readable medium comprising instructions configured to reduce volatile memory (80) usage in a multi-function peripheral (26) comprising a printer by loading some individual software components (204) and not loading other individual software components (204), the instructions being executable to:

examine a loading table (206) to determine which of a plurality of individual software components (204) are to be loaded into volatile memory (80), wherein the software components (204) comprise software libraries, wherein the individual software components (204) that are loaded into the volatile memory (80) correspond to a configuration of the multi-function peripheral (26), and wherein the individual software components (204) that are not loaded into the volatile memory (80) do not correspond to the configuration of the multi-functional peripheral (26); (page 5, lines 9-10; page 6, line 22 - page 7, line 9; page 7, lines 20-21)

load each of the plurality of individual software components (204) that are to be loaded, as indicated in the loading table (206), into the volatile memory (80) so that these software components (204) are all loaded into the volatile memory (80) at the same time; and (page 7, line 21 - page 8, line 4)

not load any of the plurality of individual software components (204) that are not to be loaded into the volatile memory (80) as indicated in the loading table (206). (page 7, line 21 - page 8, line 4)

67. A method for reducing volatile memory (80) usage in a multi-functional peripheral (26) comprising a printer by loading some individual software components (204) and not loading other individual software components (204), the method comprising:

examining a loading table (206) to determine which of a plurality of individual software components (204) are to be loaded into volatile memory (80), wherein the software components (204) comprise software libraries, wherein the individual software components (204) that are loaded into the volatile memory (80) correspond to a configuration of the multi-function peripheral (26), and wherein the individual software components (204) that are not loaded into the volatile memory (80) do not correspond to the configuration of the multi-functional peripheral (26); (page 5, lines 9-10; page 6, line 22 - page 7, line 9; page 7, lines 20-21)

loading each of the plurality of individual software components (204) that are to be loaded, as indicated in the loading table (206), into the volatile memory (80) so that these software components (204) are all loaded into the volatile memory (80) at the same time; and (page 7, line 21 - page 8, line 4)

not loading any of the plurality of individual software components (204) that are not to be loaded into the volatile memory (80) as indicated in the loading table (206). (page 7, line 21 - page 8, line 4)

6. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The following issue is presented for review:

- A. Whether claims 47-53, 55-63, 65-72, 74 and 75 are unpatentable under 35 U.S.C. § 103(a) over Chrisop in view of Tominaga.

7. ARGUMENT

A. Claims 47-53, 55-63, 65-72, 74 and 75 Rejected under 35 U.S.C. § 103(a)

Claims 47-53, 55-63, 65-72 and 74-75 stand rejected under 35 U.S.C. § 103(a) based on U.S. Patent No. 7,212,306 to Chrisop et al. (hereinafter, "Chrisop") in view of U.S. Patent No. 7,148,980 to Tominaga (hereinafter, "Tominaga"). Appellants respectfully traverse.

35 U.S.C. § 103(c) states that:

Subject matter developed by another person, which qualifies as prior art only under one or more of subsections (e), (f), and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Under 35 U.S.C. § 103(c), the Chrisop reference is disqualified as prior art for purposes of 35 U.S.C. § 103 against the claimed invention because the Chrisop reference and the present application were, at the time the claimed invention was made, both assigned to Sharp Laboratories of America, Inc.

The Chrisop reference has two inventors: Roy Kenneth Chrisop and Daniel Leo Klave. On August 30, 2001, both inventors (i.e., both Chrisop and Klave) assigned their rights in the claimed invention to Sharp Laboratories of America, Inc.

The present application has three inventors: Daniel Leo Klave, Roy Kenneth Chrisop and Lena Sojian. On January 8, 2002, all three inventors (i.e., Klave, Chrisop and Sojian) assigned their rights in the claimed invention to Sharp Laboratories of America, Inc.

Thus, as of the filing date of the present application (i.e., January 15, 2002), both the Chrisop reference and the present application were assigned to the same organization, namely Sharp Laboratories of America, Inc.

The Office Action states:

The reference Chrisop (US Patent No. 7,212,306, only 2 inventors Chrisop and Klave) was filed on August 31, 2001, assigned to Sharp Laboratories of America, Inc. on September 29, 2005....

(Office Action, pages 3-4; emphasis added.) This is incorrect. The Chrisop reference was assigned to Sharp Laboratories of America, Inc. on August 30, 2001. This can be seen by reference to the assignment itself, which is recorded in the U.S. Patent Office on reel number 016846, frame numbers 0669-0672. The U.S. Patent Office Assignment Database clearly shows that the execution date of the assignment is August 30, 2001.

Perhaps the Examiner is confusing the date that the assignment was *executed* (August 30, 2001) with the date that the assignment was *recorded* (September 29, 2005). However, the date that the assignment was *executed* is the date on which rights were transferred from the inventors to Sharp Laboratories of America, Inc.

The Office Action also states:

The instant application was filed on January 15, 2002 (3 inventors Chrisop, Klave, and Sojian) and assigned to Sharp Laboratories of America, Inc. on January 15, 2002.

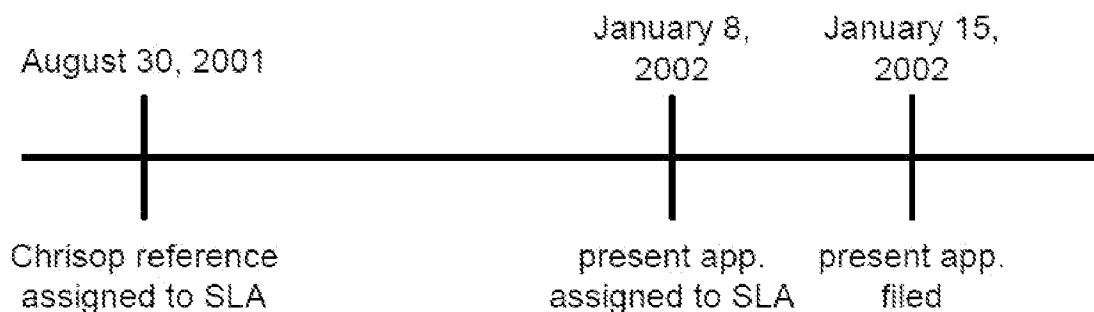
(Office Action, page 3; emphasis added.) This is also incorrect. The present application was assigned to Sharp Laboratories of America, Inc. on January 8, 2002. This can be seen by reference to the assignment itself, which is recorded in the U.S. Patent Office on reel number 012511, frame numbers 0753-0756. The U.S. Patent Office Assignment Database clearly shows that the execution date of the assignment is January 8, 2002. Once again, it appears that the Examiner has confused the date that the assignment was *executed* (January 8, 2002) with the date that the assignment was *recorded* (January 15, 2002).

The Office Action also states:

[A]t the time the invention was made (January 15, 2002), the reference Chrisop was owned by 2 inventors Chrisop and Klave, wherein the instant application (3 inventors Chrisop, Klave, and Sojian) was assigned to Sharp Laboratories of America, Inc.

(Office Action, pages 3-4.) This is also incorrect. At the time the present application was filed (January 15, 2002), both the Chrisop reference and the present application were assigned to Sharp Laboratories of America, Inc.

Page 3 of the Office Action includes a diagram that includes inaccurate information about the assignment dates of the Chrisop reference and the present application. The correct diagram is as follows:



Thus, 35 U.S.C. § 103(c) does apply, and the Chrisop reference is disqualified as prior art for purposes of 35 U.S.C. § 103 against the claimed invention. Accordingly, Appellants respectfully submit that claims 47-53, 55-63, 65-72 and 74-75 are allowable. Reversal of the Examiner's rejection is respectfully requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Wesley L. Austin".

/Wesley L. Austin/

Wesley L. Austin
Reg. No. 42,273
Attorney for Appellants

Date: February 5, 2009

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CLAIMS APPENDIX

Listing of Claims involved in the appeal:

47. A multi-functional peripheral comprising a printer configured to reduce volatile memory usage by selectively loading some individual software components and not loading other individual software components, the multi-functional peripheral comprising:

a processor;

volatile memory in electronic communication with the processor;

non-volatile memory in electronic communication with the processor comprising:

a plurality of individual software components, wherein the software components comprise software libraries; and

a loading table that indicates which of the plurality of individual software components are loaded into the volatile memory and which of the plurality of individual software components are not loaded into the volatile memory, wherein the individual software components that are loaded into the volatile memory correspond to a configuration of the multi-function peripheral, and wherein the individual software components that are not loaded into the volatile memory do not correspond to the configuration of the multi-functional peripheral;

instructions stored in the non-volatile memory that are executable to:

examine the loading table to determine which of the plurality of individual software components are to be loaded into the volatile memory; and

load each of the plurality of individual software components that are to be loaded, as indicated in the loading table, into the volatile memory so that these software components are all loaded into the volatile memory at the same time; and not load any of the plurality of individual software components that are not to be loaded into the volatile memory as indicated in the loading table.

48. The multi-functional peripheral comprising a printer as defined in claim 47, wherein the multi-functional peripheral is a printer/fax/copier.

49. The multi-functional peripheral comprising a printer as defined in claim 47, further comprising an input component in electronic communication with the processor for a user to enter user input and thereby configure the loading table.

50. The multi-functional peripheral comprising a printer as defined in claim 49, further comprising a display in electronic communication with the processor that displays information to the user relating to the loading table.

51. The multi-functional peripheral comprising a printer as defined in claim 50, further configured with a menu structure that may be navigated by a user using the input component and the display to configure the loading table.

52. The multi-functional peripheral comprising a printer as defined in claim 47, wherein the loading table is a license table comprising a list of licenses relating to the individual software components.

53. The multi-functional peripheral comprising a printer as defined in claim 52, wherein the individual software components with licenses, as indicated by the license table, are loaded into the volatile memory.

55. The multi-functional peripheral comprising a printer as defined in claim 47, further comprising:

- a communications module in electronic communication with the processor for communications with a computer; and
- a web interface accessible by a user through use of a web browser to configure the loading table.

56. The multi-functional peripheral comprising a printer as defined in claim 47, wherein the instructions are further executable to:

- examine a hardware configuration by a loader application; and
- modify the loading table based on the hardware configuration.

57. A computer-readable medium comprising instructions configured to reduce volatile memory usage in a multi-function peripheral comprising a printer by loading some individual software components and not loading other individual software components, the instructions being executable to:

examine a loading table to determine which of a plurality of individual software components are to be loaded into volatile memory, wherein the software components comprise software libraries, wherein the individual software components that are loaded into the volatile memory correspond to a configuration of the multi-function peripheral, and wherein the individual software components that are not loaded into the volatile memory do not correspond to the configuration of the multi-functional peripheral;

load each of the plurality of individual software components that are to be loaded, as indicated in the loading table, into the volatile memory so that these software components are all loaded into the volatile memory at the same time; and

not load any of the plurality of individual software components that are not to be loaded into the volatile memory as indicated in the loading table.

58. The computer-readable medium as defined in claim 57, wherein the multi-functional peripheral comprising a printer is a printer/fax/copier.

59. The computer-readable medium as defined in claim 57, further comprising a user configuring the loading table.

60. The computer-readable medium as defined in claim 59, wherein the instructions are further executable to provide a user interface to the user for configuring the loading table.

61. The computer-readable medium as defined in claim 60, wherein the user interface includes a menu structure that may be navigated by the user to configure the loading table.

62. The computer-readable medium as defined in claim 57, wherein the loading table is a license table comprising a list of licenses relating to the individual software components.

63. The computer-readable medium as defined in claim 62, wherein the individual software components with licenses, as indicated by the license table, are loaded into the volatile memory.

65. The computer-readable medium as defined in claim 57, wherein the instructions are further executable to provide a web interface accessible by a user through use of a web browser to configure the loading table.

66. The computer-readable medium as defined in claim 57, wherein the instructions are further executable to:

examine a hardware configuration by a loader application; and
modify the loading table based on the hardware configuration.

67. A method for reducing volatile memory usage in a multi-functional peripheral comprising a printer by loading some individual software components and not loading other individual software components, the method comprising:

examining a loading table to determine which of a plurality of individual software components are to be loaded into volatile memory, wherein the software components comprise software libraries, wherein the individual software components that are loaded into the volatile memory correspond to a configuration of the multi-function peripheral, and wherein the individual software components that are not loaded into the volatile memory do not correspond to the configuration of the multi-functional peripheral;

loading each of the plurality of individual software components that are to be loaded, as indicated in the loading table, into the volatile memory so that these software components are all loaded into the volatile memory at the same time; and

not loading any of the plurality of individual software components that are not to be loaded into the volatile memory as indicated in the loading table.

68. The method as defined in claim 67, wherein the multi-functional peripheral comprising a printer is a printer/fax/copier.

69. The method as defined in claim 67, further comprising providing a user interface to the user for configuring the loading table.

70. The method as defined in claim 69, wherein the user interface includes a menu structure that may be navigated by the user to configure the loading table.

71. The method as defined in claim 67, wherein the loading table is a license table comprising a list of licenses relating to the individual software components.

72. The method as defined in claim 71, wherein the individual software components with licenses, as indicated by the license table, are loaded into the volatile memory.

74. The method as defined in claim 67, further comprising providing a web interface accessible by a user through use of a web browser to configure the loading table.

75. The method as defined in claim 67, further comprising:
examining a hardware configuration by the loader application; and
modifying the loading table based on the hardware configuration.

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EVIDENCE APPENDIX

NONE.

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RELATED PROCEEDINGS APPENDIX

NONE.